What is Claimed is:

1. A drive axle assembly for use in a motor vehicle to transfer drive torque from a powertrain to a pair of wheels, comprising:

an axle housing defining a pump chamber, a drive chamber and an accumulator chamber;

a pinion shaft adapted to receive drive torque from the powertrain and having a shaft segment extending through said pump chamber and a pinion gear disposed in said drive chamber;

a drive assembly located in said drive chamber and including a drive case rotatably supported by said axle housing, a ring gear secured to said drive case and meshed with said pinion gear, first and second output shafts supported for rotation relative to said drive case and adapted for connection to the pair of wheels, a first friction clutch operably disposed between said drive case and said first output shaft, a first actuator for applying a clutch engagement force on said first friction clutch in response to fluid pressure exerted thereon, a second friction clutch operably disposed between said drive case and said second output shaft, a second actuator for applying a clutch engagement force on said second friction clutch in response to fluid pressure exerted thereon, and a pump disposed in said pump chamber and operable to pump fluid from a sump of hydraulic fluid within said drive chamber to said accumulator chamber; and

a traction control system including a first control valve disposed in a first flow path between said accumulator chamber and said first actuator, a second control valve disposed in a second flow path between said accumulator chamber

and said second actuator, speed sensors for detecting the rotary speed of said pinion shaft and said first and second output shafts, a first temperature sensor for detecting the fluid temperature at said first friction clutch, a second temperature sensor for detecting the fluid temperature at said second friction clutch, a third temperature sensor for detecting the fluid temperature in said sump, and a control unit receiving speed signals from said speed sensors and temperature signals from each of said temperature sensors and generating electric control signals in response thereto, said electric control signals supplied to said first and second control valves to vary the fluid pressure exerted on said first and second actuators.

2. The drive axle assembly of Claim 1 wherein said control unit includes logic for controlling actuation of said first control valve in response to predetermined relationships related to speed differences between said pinion shaft and said first output shaft.

3. The drive axle assembly of Claim 2 wherein said logic is further operable to control actuation of said second control valve in response to predetermined relationships related to speed differences between said pinion shaft and said second output shaft.

4. The drive axle assembly of Claim 3 wherein said logic is further operable to control actuation of said first and second control valves in response to speed differences between said first and second output shafts.

5. The drive axle assembly of Claim 2 wherein said logic is further operable to compensate for changes in fluid viscosity within said sump based on the fluid temperature detected by said third temperature sensor.

6. The drive axle assembly of Claim 1 wherein said control unit is adapted to open said first control valve and vent fluid to said sump for releasing engagement of said first friction clutch when the fluid temperature detected by said first temperature sensor exceeds a predetermined value.

7. The drive axle assembly of Claim 1 wherein said first control valve is mounted in a first valvebody that is secured to said axle housing within said drive chamber, and wherein said second control valve is mounted in a second valvebody that is secured to said axle housing within said drive chamber.

8. The drive axle assembly of Claim 7 wherein said drive case includes a drum, a first clutch housing secured to said drum that is supported for rotation relative to said first valvebody, and a second clutch housing secured to said drum that is supported for rotation relative to said second valvebody.

9. An all-wheel drive vehicle comprising:

a powertrain;

a primary driveline driven by said powertrain for transferring drive torque to a pair of primary wheels;

a power take-off unit driven by said powertrain;

a secondary driveline including a drive axle assembly and a pair of secondary wheels, said drive axle assembly having an axle housing defining a pump chamber, a drive chamber and an accumulator chamber, a pinion shaft driven by said power take-off unit and having a shaft segment extending through said pump chamber and a pinion gear disposed in said drive chamber, and a drive unit located in said drive chamber, said drive unit including a drive case rotatably supported by said axle housing, a ring gear secured to said drive case and meshed with said pinion gear, first and second output shafts supported for rotation relative to said drive case and connected to said pair of secondary wheels, a first friction clutch operably disposed between said drive case and said first output shaft, a first actuator for applying a clutch engagement force on said first friction clutch in response to fluid pressure exerted thereon, a second friction clutch operably disposed between said drive case and said second output shaft, a second actuator for applying a clutch engagement force on said second friction clutch in response to fluid pressure exerted thereon, and a pump disposed in said pump chamber and operable to pump fluid from a sump of hydraulic fluid to said accumulator chamber; and

a traction control system including a first control valve disposed in a first flow path between said accumulator chamber and said first actuator, a second control valve disposed in a second flow path between said accumulator chamber and said second actuator, speed sensors for detecting the rotary speed of said pinion shaft and said first and second output shafts, a first temperature sensor for detecting the fluid temperature at said first friction clutch, a second temperature sensor for detecting the fluid temperature at said second friction clutch, a third temperature sensor for detecting the fluid temperature in said sump, and a control unit receiving speed signals from said speed sensors and temperature signals from each of said temperature sensors and generating electric control signals in response thereto, said electric control signals supplied to said first and second control valves to vary the fluid pressure exerted on said first and second actuators.

10. The all-wheel drive vehicle of Claim 9 wherein said control unit includes logic for controlling actuation of said first control valve in response to predetermined relationships related to speed differences between said pinion shaft and said first output shaft.

11. The all-wheel drive vehicle of Claim 10 wherein said logic is further operable to control actuation of said second control valve in response to predetermined relationships related to speed differences between said pinion shaft and said second output shaft.

12. The all-wheel drive vehicle of Claim 11 wherein said logic is further operable to control actuation of said first and second control valves in response to speed differences between said first and second output shafts.

13. The all-wheel drive vehicle of Claim 9 wherein said control unit is adapted to open said first control valve and vent fluid to said sump for releasing engagement of said first friction clutch when the fluid temperature detected by said first temperature sensor exceeds a predetermined value.

14. The all-wheel drive vehicle of Claim 9 wherein said first control valve is mounted in a first valvebody that is secured to said axle housing within said drive chamber, and wherein said second control valve is mounted in a second valvebody that is secured to said axle housing within said drive chamber.

15. A drive axle assembly for use in a motor vehicle to transfer drive torque from a powertrain to a pair of wheels, comprising:

a housing defining a pump chamber, a gear chamber, and first and second clutch chambers;

a pinion shaft adapted to receive drive torque from the powertrain and having a shaft segment extending through said pump chamber and a pinion gear disposed in said gear chamber;

a drive unit supported for rotation in said gear chamber and including a drive case having a ring gear meshed with said pinion gear;

a first output shaft supported for rotation relative to said housing and said drive unit and adapted for connection to one of the wheels;

a second output shaft supported for rotation relative to said housing and said drive unit and adapted for connection to the other of the wheels;

a first hydraulic coupling located within said first clutch chamber and including a first friction clutch operably disposed between said drive case and said first output shaft, a first actuator for engaging said first friction clutch in response to fluid pressure exerted thereon, and a first control valve for controlling the fluid pressure exerted on said first actuator;

a first seal mechanism for providing a fluid-tight seal between said first clutch chamber and said gear chamber;

a second hydraulic coupling located within said second clutch chamber and including a second friction clutch operably disposed between said drive case and said second output shaft, a second actuator for engaging said

second friction clutch in response to fluid pressure exerted thereon, and a second control valve for controlling the fluid pressure exerted on said second actuator;

a second seal mechanism for providing a fluid-tight seal between said second clutch chamber and said gear chamber;

a pump disposed in said pump chamber and driven by said pinion shaft for supplying pressurized fluid to said first and second control valves; and

a traction control system including speed sensors for detecting the rotary speed of said pinion shaft and said first and second output shafts, a first temperature sensor for detecting the fluid temperature in said first clutch chamber, a second temperature sensor for detecting the fluid temperature in said second clutch chamber, and a control unit receiving speed signals from said speed sensors and temperature sensors and generating control signals in response thereto, said control signals delivered to said first and second control valves to independently vary the fluid pressure exerted on said first and second actuators.

16. The drive axle assembly of Claim 15 wherein said control unit includes logic for controlling actuation of said first control valve in response to predetermined relationships related to speed differences between said pinion shaft and said first output shaft.

17. The drive axle assembly of Claim 16 wherein said logic is further operable to control actuation of said second control valve in response to predetermined relationships related to speed differences between said pinion shaft and said second output shaft.

18. The drive axle assembly of Claim 17 wherein said logic is further operable to control actuation of said first and second control valves in response to speed differences between said first and second output shafts.

19. The drive axle assembly of Claim 16 wherein said logic is further operable to compensate for changes in fluid viscosity based on the fluid temperature detected by a third temperature sensor.

20. The drive axle assembly of Claim 15 wherein said control unit is adapted to open said first control valve and vent fluid for releasing engagement of said first friction clutch when the fluid temperature detected by said first temperature sensor exceeds a predetermined value.

21. The drive axle assembly of Claim 15 further comprising an accumulator in fluid communication with an outlet of said pump and an inlet to each of said first and second control valves.

22. The drive axle assembly of Claim 15 wherein a first fluid is entrained in said gear chamber and a second fluid is entrained i said first and second clutch chambers and is in fluid communication with said pump.